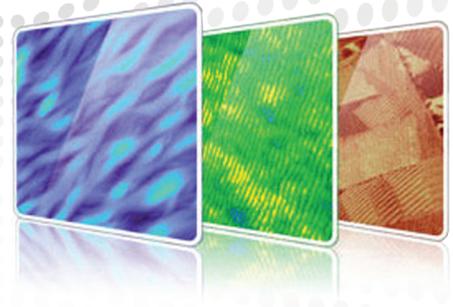


NT NEWS

NT-MDT in the USA



News Letter #1, November 2014

Our mission



With this News Letter we are initiating regular communication to the USA research community regarding our company's research and development activities and promotions of our scanning probe microscopy (SPM) and Raman instruments. For a quarter of century commercial SPM microscopes have attracted scientists by the unique capabilities of materials' characterization at small scales. This is an ongoing journey to the nanoscale, and our team consolidates long-term experience, strong motivation and hard-work ethics for continuous improvements of the instrumentation and applications. Our goal is to provide researchers

with the most sophisticated instruments for quantitative measurements of structure and properties of materials. In achieving this mission we are advancing the local studies with contact and oscillatory (non-resonant - HybriD and resonant - Amplitude modulation) modes using their complimentary nature for quantitative nanoscale measurements of mechanical and electric properties. In a further extension of AFM we have combined it with spectroscopic Raman studies where the spatial resolution approaches a few nanometers with the tip-enhanced technique. We are rigorously proving the quality of our microscopes and validity of various measurements with applications on different samples thus providing our customers with a database for successful studies of materials of their interest.

New NT-MDT office in the USA

Starting this year the NT-MDT activities in the USA are guided from a new office in Tempe AZ where the sales and technical support groups are working side-by-side with an experienced research and development team. This arrangement further strengthens our support of our US customers and enhances their awareness about novel research projects and advanced applications of our microscopes. The office occupies 8400 sq. ft. space and includes, besides the offices and conference areas, several demonstration and research laboratories, which are equipped with the whole range of NT-MDT SPM microscopes and several set-ups for combined AFM and Raman studies. The facilities have been already used for

demonstrations for potential customers and recently we held an AFM-Raman Workshop. The office is located in a close proximity to Arizona State University and a large number of technology companies such as Intel, Freescale, Honeywell and others. Several co-operations with the local research community have been initiated and this helps promoting scanning probe microscopy, in general, and the innovative functions of NT-MDT instruments for quantitative measurements of materials properties at the nanoscale. We will be glad to help academic and industrial scientists in the evaluation of the SPM and AFM-Raman capabilities for solving their research problems. Please, don't hesitate to contact us: info@ntmdt-america.com

From the Laboratories

To address the education and research needs the researchers of San Bernardino State University acquired a combined set-up consisting of our NEXT and Solver Nano microscopes, which were recently installed in laboratories of the Physics Department guided by Profs. Paul Dixon and Tim Usher. The Solver Nano is used in the education process and students are learning about this method and its applications with the probes prepared by them. The NEXT instrument is employed in the electric and high-voltage piezoresponse force studies of ferroelectrics and piezoelectric materials. In the effort to understand the relationship between piezoelectric properties at the small and macro scales, the SPM microscope was successfully integrated with a macroscopic piezo-tester from Radiant Technologies.



AFM-Raman live demo at the NT-MDT Workshop in Tempe

NT-MDT Workshop in Tempe

On November 12, at the new NT-MDT office the company hosted a workshop introducing its SPM technology to local Universities (Arizona State University and University of Arizona) and industry. The workshop was attended by researchers involved in different application areas (Semiconductors, Polymers, Chemistry, etc.). In addition to the overview lectures on AFM and AFM-Raman advanced applications the participants enjoyed live demonstration sessions of three microscopes, which were used for local mechanical, electric and spectroscopic studies. The attendees paid special attention to AFM-Raman measurements, which are relative new for them. The simultaneous studies of surface topography, mechanical/electric properties and Raman maps enhance the identification of components in complex materials.

We will continue such workshops in future and not only in Arizona. The next workshop is tentatively planned at Carnegie Mellon University in Pittsburgh in the beginning of 2015. We will be glad to see you at such events and we are open to your suggestions regarding the locations and topics.

2014 MRS Fall Meeting and Show in Boston

Traditionally, the MRS Fall meeting is a large gathering of the USA and international scientists, and SPM-related Symposiums and Exhibition Booths of SPM manufacturers are always attract their attention.

This year NT-MDT company will present its leading products Titanium microscope, and AFM-Raman NTE-GRA Spectra system. Titanium will be installed in an innovative thermal cabinet that allows low drift measurements. Live demonstration of Tip-Enhanced Raman Microscopy will be performed with NTEGRA Spectra system. The company researchers will present 2 oral lectures and one poster at MRS Symposium on advances in SPM. Two new applications notes on high-resolution imaging and AFM-Raman studies will be presented at our Booth #210/211.

Forthcoming NT-MDT Events in 2015

An NT-MDT webinar on AFM-Raman applications is planned for January 14, 2015.

Archive

For recent documents on latest Webinar and Applications Notes, please check the following address:

<http://www.ntmdt.com/webinars/archive>

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